#include<iostream>

#include<conio.h>

using namespace std;

void merge\_sort(int a[], int, int);

void merge\_array(int a[], int, int, int);

int main()

{

int a[5], n=4;

cout<<"enter the array element:\n";

for(int i=0;i<5;i++)

cin>>a[i];

cout<<"before sort\n";

for(int i=0;i<5;i++)

cout<<a[i]<<" ";

merge\_sort(a, 0, n);

cout<<"\nafter sorting:";

for(int i=0;i<5;i++)

cout<<a[i]<<" ";

}

void merge\_sort(int a[], int beg, int end)

{

int mid;

if (beg < end)

{

mid = (beg+end)/2;

merge\_sort(a, beg, mid);

merge\_sort(a, mid+1, end);

merge\_array(a, beg, mid, end);

}

}

void merge\_array(int a[], int beg, int mid, int end)

{

int i=beg,k=beg, j=mid+1, b[5];

while ((i<=mid) && (j<=end))

if (a[i] <= a[j])

b[k++] = a[i++];

else

b[k++] = a[j++];

while (i <= mid)

b[k++] = a[i++];

while (j <= end)

b[k++] = a[j++];

for (int p=beg; p<=end; p++)

a[p]=b[p];

}